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WORKING DOCUMENT

Report  
of the Scientific Veterinary Committee  
on  
Programmes for Monitoring Classical Swine Fever

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**REQUEST FOR AN OPINION BY THE SCIENTIFIC VETERINARY COMMITTEE**  
**(ANIMAL HEALTH) ON PROGRAMMES FOR MONITORING CLASSICAL SWINE FEVER**  
**AND SEROLOGICAL SURVEILLANCE FOLLOWING AN OUTBREAK**

**BACKGROUND**

1. Classical swine fever is an infectious disease on the brink of eradication from domestic pig herds in the European Community. However, the disease is endemic in wild boar in certain localised areas of the Community and the annual meeting of National Swine Fever laboratories recommended that the Commission should seek advice on a suitable monitoring programme.
  2. Furthermore Council Directive 80/217/EEC as last amended by Directive 91/685/EEC of 31 December 1991 requests the Commission to determine a programme for the serological examination of pigs kept on holdings situated within a surveillance zone established due to an outbreak of Classical Swine Fever.
  3. In the light of the above recommendations and the request from the Council the Commission invited the Scientific Veterinary Committee to :-
    - a) draw up recommendations for monitoring Classical Swine Fever in domestic pigs and the European wild boar in the Community.
    - b) draw up a programme for the serological examination referred to in Article 9(7)(c) of Council Directive 80/217/EEC.
  4. The Committee appointed a subgroup for this purpose under the chairmanship of Dr C Terpstra; the membership of the group is given in the Annex. The draft report prepared by the group was submitted to the Scientific Veterinary Committee which approved it after certain amendments.
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A. COMMUNITY OR NATIONAL SURVEILLANCE

5. The group discussed the best way to maintain surveillance within the Community as a whole. It recognised the problem that a random survey would not detect infection at a low prevalence without the sample size being so large as to make the survey quite impractical.
6. In order to detect outbreaks at an early stage, Member States shall ensure a continuous monitoring system for classical swine fever. In the context of such a programme samples suspect of classical swine fever shall be submitted for diagnosis to an approved Regional or National Laboratory.
7. The group agreed that the purpose of surveillance should be :-
  - to maintain expertise at CSF laboratories as part of general preparedness,
  - to detect hidden clusters of infected herds,
  - to minimize risks of infection spreading from unknown sources.
8. In order to maintain expertise each national laboratory should examine 2000 samples per annum. Where other laboratories are involved in CSF diagnosis then these should in addition examine at least 500 samples under the supervision of the national laboratory
  - the animals to be sampled should be preferably sows and boars, sampled either at abattoirs or at the farm,
  - AI centres should be sampled,
  - the surveys should concentrate on the herds most at risk. These are :-
    - \* small breeding herds near towns or small farms where sows are fattened for slaughter and might be fed with swill
    - \* boars used for natural service particularly boars used on several farms
    - \* herds in areas bordering third countries, particularly those with wild boar
    - \* herds in areas with wild boar.

Abattoir surveillance requires that the sows can be traced back to the herd of origin.

The herds tested should be changed from year to year.

B. SURVEILLANCE OF WILD BOAR

9. General provisions

It was agreed that each Member State should be prepared to deal with CSF outbreaks in wild boar. The first step was to built up a working relationship between the veterinary authorities and the relevant authorities involved in wild life conservation, regulating hunting and licensing for hunting.

The established relationship should ensure that :

- the veterinary authorities would be aware of the population distribution of wild boar within the territory of the Member State,
- a good information channel exists for reporting any excess death in wild boar,
- a link exists between the National Classical Swine Fever laboratory hunting organizations and wildlife scientists. This could consist of testing blood samples each year for Classical Swine Fever. The number to be tested would depend on the size and distribution of the wild boar populaton. The target could be 1% - 2% of all wild boar shot in a selected area or 100 samples per laboratory authorized to test for CSF. The samples should be randomly collected from the wild boar population.

10. Suspicion of Classical Swine Fever

The veterinary authorities shall, when information has been received about suspicion of CSF in wild boar, immediately take the appropriate measures to confirm the presence of disease. These measures shall include :

- distribution of information to the relevant authorities involved in wild life conservation and the regulation of hunting,
- laboratory examination of wild boar shot and wild boar found dead.

11. Confirmation of Classical Swine Fever

As soon as Classical Swine Fever has been confirmed in wild boar measures and actions as listed below shall be carried out :

a) Definition of infected area (Protection Zone).

When defining the infected area the veterinary authorities shall take into account :

- (i) the wild boar population in the area,
- (ii) the estimated distribution of the disease. All infected wild boar families shall be within the area,
- (iii) the existence of major natural or man-made obstacles to movements of wild boar;

b) Retaining wild boar population in infected area.

In order to prevent movement of wild boar out of the infected area due consideration should be given to the supply of feed (grain) and method of hunting.

c) Surveillance in infected area.

All wild boar shot or found dead shall undergo a laboratory examination. An epizootiological enquiry shall be carried out in each case.

The surveillance shall continue for 12 months following the last positive case. Following this 12 month period the surveillance shall include all wild boar found dead and 10% of all wild boar shot for a period of 12 months.

- d) Surveillance in area bordering the defined infected area.

Wild boar families in areas (surveillance zone) bordering the defined infected area shall be covered by a surveillance programme, which includes laboratory testing of all wild boar found dead and 10% of all wild boar shot for a period of 12 months.

12. Disease protection measures

A ban must exist on the use of meat, meat scraps and offal as feed to wild boar. It is desirable to look for the development of a vaccine, which can be administered to wild boar by the oral route.

- C. SURVEILLANCE PROCEDURES IN PROTECTION (3 KM RADIUS) AND SURVEILLANCE (10 KM RADIUS) ZONES (as in Directive 80/217/EEC as amended by 91/685/EEC)

THE SIZE OF THE ZONES

13. These zones are minimum requirements. Member States can set wider zones if they consider the epidemiological situation warrants it.

THE SEROLOGICAL SAMPLING PROCEDURES IN THE PROTECTION (3 km) ZONE

14. All pig herds in the zone should be sampled on two occasions
- the first time immediately after the detections of the outbreak. This round of testing is to identify herds that may have been infected for some time before the outbreak was detected;
  - the second time at least 35 days after the completion of preliminary disinfection on the original infected premises (I.P.) or 40 days after the imposition of movement restrictions.
15. The reasons for delaying the second round of testing for 35 days are as follows :-

- (a) a serological response can take 2-3 weeks to develop in infected animals. Thus on a holding casually infected by movements of people, transport, etc., one would expect to find only the index case or cases 2-3 weeks after the date of contamination. These would have excreted virus 1-2 weeks after being infected giving rise to a far greater number of infected animals that would become reactors 2-3 weeks later, i.e. 1-2 weeks plus 2-3 weeks after the holding was contaminated.
- (b) if herds are sampled at least 35 days after the last possible date of contamination on the I.P. most of the pigs in the contaminated pen will be serological reactors. If all the pigs in a pen are infected then sampling one pig per pen is sufficient. However, allowance has to be made for infections caused by a virus of low virulence which may spread more slowly within a pen. If there is evidence of such a virus at the infected premises then more than one pig per pen should be tested on holdings within the 3 km zone. In order to confirm or exclude the presence of CSF, all pens should be sampled.

#### SURVEILLANCE IN THE 10 KM ZONE

- 16. Surveillance in a 10 km zone is necessary to provide inter-Community trade with the reassurance that previously undetected infection is being identified. The best way of detecting such infected herds is via tracing and the measures specified in art. 9, par. 6 of the Directive.
- 17. The serological sampling procedures in the 10 km zone have to be sufficient to provide 'trade confidence' and at the same time not so great that they overwhelm laboratory and field resources. The survey should be confined to breeding herds as these herds give the most cause for concern in intra-Community trade in live pigs. Fattening herds are generally infected by moving an infected pig, and thus they should be picked up by routine tracing.

18. The breeding herds that are most at risk of contracting infection are small herds and for the following reasons :
- in these herds CSF, particularly the disease associated with low virulence strains of virus, may easily escape detection by the farmer.
  - smaller herds are visited less often by veterinarians.
  - small herds are more likely to be fed swill or kitchen waste.
19. Regarding the timing of sampling in the surveillance zone the directive states that sampling may not take place before 15 days have elapsed after the completion of sanitation at the I.P. and it was felt that this was unsatisfactory. It might identify 'old' disease but would not identify infection due to contamination from the I.P. for the reasons given in 7(b) above. However, the group recognised the practical difficulty of keeping all the holdings in a 10 km area (up to 1500 herds in some parts of the Community) under movement restrictions for long periods of time. Despite this the group emphasized that a period of 35 days (after completion of sanitation at the I.P.) was essential.
20. All breeding herds in the 10 km zone should be sampled. Within each herd sows should be sampled at random. Sows move about a herd more often than do other classes of pigs and are therefore more liable to contract infection. The number of sows tested should be sufficient to identify 10%-15% prevalence with 95% certainty.
21. In small herds (up to 40 sows) a sample of 21 animals and in larger herds 27 animals is sufficient to identify a seroprevalence of 10% or more (95% confidence).
22. To identify 15% seroprevalence a sample of up to 15 sows is required in herds of up to 40 sows and 19 sows in larger herds.



ANNEX

SCIENTIFIC VETERINARY COMMITTEE (ANIMAL HEALTH)

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